

## PROJECT DESCRIPTION

## I. GENERAL

This project involves the modification of an existing Traffic Control Signal with interconnect at the intersection of MD 140 (Reisterstown Rd) and Dolfield Blvd/Richmar Road in Baltimore County. The existing signal heads shall be replaced with LED signal heads and existing pedestrian signal heads with Countdown pedestrian signals and APS. MD 140 (Reisterstown Rd) is assumed to run a north-south direction.

## II. INTERSECTION OPERATION

- The intersection is to operate in a NEMA six-phase, fully-actuated mode, with the MD 140 (Reisterstown Rd) approaches running concurrently. The Exclusive/Permissive left turn phase for the northbound and southbound approach of MD 140 (Reisterstown Rd) will continue to operate as normal. The Countdown pedestrian phase with audible pushbutton actuation shall be provided across the north leg of MD 140 (Reisterstown Rd) and west leg of Dolfield Blvd. The Countdown pedestrian phase with audible pushbuttons across Dolfield Blvd shall be on recall. The side street approaches shall continue to operate concurrently.
- A full-traffic-actuated, existing eight-phase controller with proposed 2-wire Central Control Unit and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be utilized at this intersection.
- SHA signal shop shall install APS central control unit into controller cabinet. The Contractor shall deliver the Central Control Unit and audible pushbuttons to the SHA Signal Shop for testing and programming.

## III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by the S.H.A. Signal Shop. Contact Mr. Ed Rodenhizer at (410) 787-7652 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- APS will function as follows:  
FOR MD 140 (REISTERSTOWN RD)
  - When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce "Wait to cross Reisterstown at Dolfield and Richmar"
  - When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.FOR DOLFIELD BOULEVARD
  - When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will announce "Wait to cross Dolfield at Reisterstown."
  - When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

The contact persons for District #4 are as follows:

Ms. Erin Kuhn  
Assistant District Engineer - Traffic  
Phone: (410) 321-2781

Mr. Richard L. Daff, Sr.  
Chief, Traffic Operations Division  
Phone: (410) 787-7630

Mr. Andre Futrell  
Assistant District Engineer - Maintenance  
Phone: (410) 321-2761

Mr. Ed Rodenhizer  
Chief, Traffic Signal Operations  
410-787-7652

Mr. Mike Pasqualello  
Assistant District Engineer - Utility  
Phone: (410) 321-2841

Mr. Sonny Bailey  
Chief Sign Shop  
410-787-7670

## EQUIPMENT LIST

## A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

ITEM NO.	DESCRIPTION	QUANTITY
9086	Video detection interface equipment: 1-4 cameras (To be installed by signal shop).	1 EA
9571	Sheet aluminum signs to consist of:	4 SF
	Pedestrian education R10-3(1) (Note: Sign to read "PUSHBUTTON TO CROSS DOLFIELD BOULEVARD")	2 EA
	Pedestrian education R10-3(1) (Note: Sign to read "PUSHBUTTON TO CROSS REISTERSTOWN ROAD")	2 EA

## B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	2 EA
1003	Removal of existing permanent pavement line markings Any Width	260 L.F.
2002	Test Pit Excavation	2 C.Y.
5001	5" white lead free permanent preformed thermoplastic pavement marking.	110 L.F.
5002	12" white lead free permanent preformed thermoplastic pavement marking.	420 L.F.
5003	24" white lead free permanent preformed thermoplastic pavement marking.	100 L.F.
8001	12" LED signal head section.	40 EA
8003	2 wire Central Control unit	1 EA
8007	8" LED signal head section.	6 EA
8010	Audible/tactile pedestrian pushbutton station & signs.	4 EA
8011	Breakaway pedestal pole (ANY SIZE)	3 EA
8014	LED 16" countdown pedestrian signal heads.	4 EA
8017	Remove and dispose of existing material & equipment per assignment.	1 EA
8028	Schedule 80 rigid PVC conduit up to 4" - trenched.	220 L.F.
8034	No. 6 AWG stranded bare copper ground wire.	350 L.F.
8048	Video detector camera & cable up to 500'.	1 EA
8056	Electrical cable - 2 conductor (No. 14 AWG).	475 L.F.
8058	Electrical cable - 5 conductor (No. 14 AWG).	475 L.F.
8059	Electrical cable - 7 conductor (No. 14 AWG).	420 L.F.

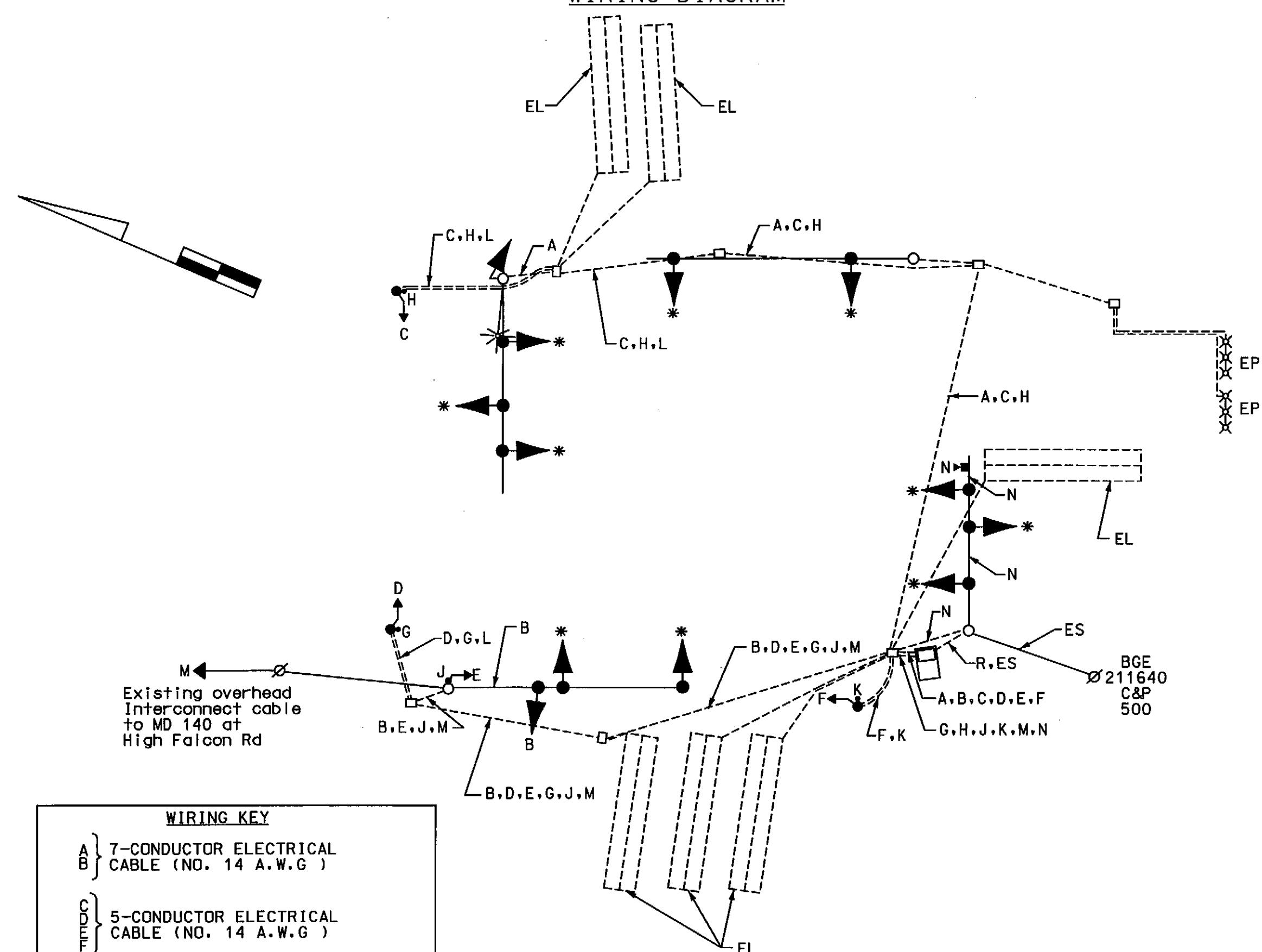
## C. EQUIPMENT TO BE REMOVED

All removed signal materials are to become the property of the contractor.

## PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PHASE 1 & 5	←G-/R	←G-/R	R	←G-/R	←G-/R	R	R	R	R/-G→	R	R	R	DW	DW	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6																
PHASE 1 & 6	R	R	R	←G-/G	←G-/G	G	R	R	R	R	R	R	DW	DW	DW	DW
1 & 6 CHANGE	R	R	R	←Y-/Y	←Y-/Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 2 & 5	←G-/G	←G-/G	G	R	R	R	R	R	R/-G→	R	R	R	DW	DW	DW	DW
2 & 5 CHANGE	←Y-/Y	←Y-/Y	Y	R	R	R	R	R	Y/-G→	R	R	R	DW	DW	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	WK	WK	DW	DW
PED CLEAR / COUNTDOWN	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	WK	WK
PED CLEAR / COUNTDOWN	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	FL/DW	FL/DW
4 ALT CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

## WIRING DIAGRAM



## WIRING KEY

A } 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

B } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

C } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

L - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

M - EXISTING OVERHEAD 12 PAIR INTERCONNECT CABLE

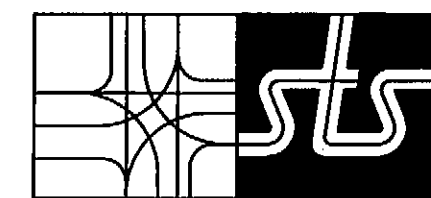
N - VIDEO DETECTION CABLE UP TO 500'

\* - USE EXISTING WIRING

EL - EXISTING LOOP

EP - EXISTING MICROLOOP PROBE

ES - EXISTING OVERHEAD SERVICE



STREET TRAFFIC STUDIES, LTD.

400 Crain Hwy., Wk.  
Glen Burnie, MD 21061

PH (410) 590-5500  
Fax (410) 590-6637

<b>SHA</b> STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION	
MD 140 (REISTERSTOWN RD.) AND DOLFIELD BLVD / RICHMAR RD REISTERSTOWN, MARYLAND	
GENERAL INFORMATION SHEET	
SCALE NONE	DATE 6/19/09 CONTRACT NO. XX4485185
DESIGNED BY JAMES ALLEN JR.	COUNTY BALTIMORE
DRAWN BY JAMES ALLEN JR.	LOGMILE 03014006.87
CHECKED BY	TIMS NO. J343
F.A.P. NO.	TOD NO.
TS NO. 3591B	DRAWING NO. 2 OF 2 SHEET NO. OF